

REMARKS

§ 102(b). Claims 1-7 and 12-18 were rejected under 35 U.S.C. §102 as being anticipated by Otaka (U.S. Patent 5,412,209). This rejection is respectfully traversed. Claims 1 and 12 (and 23) as amended recite

wherein the predetermined period is changed depending on a magnification for observing the object without changing a scanning rate of the electron beam.

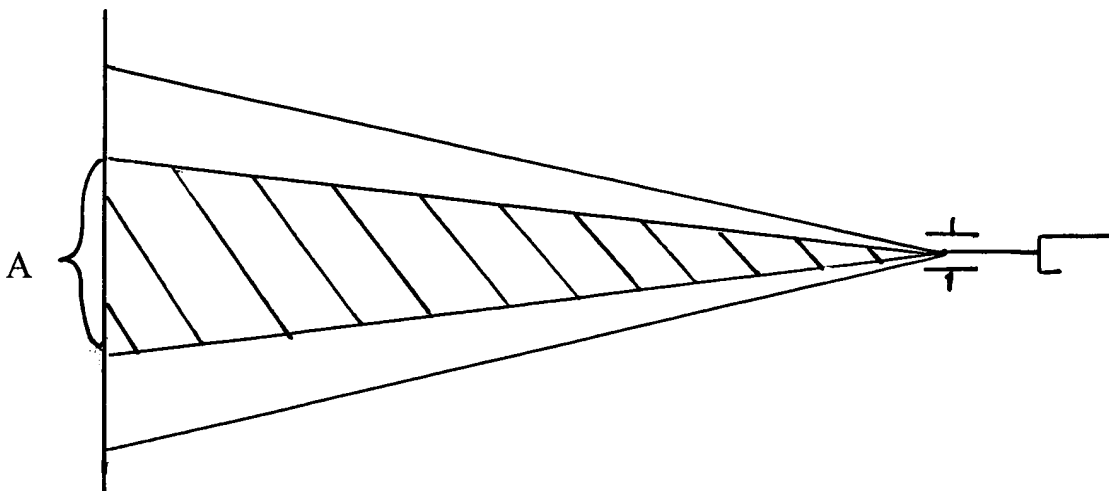
The new language makes more explicit the feature that the *portion* of the period or time for one sweep or scan (the “predetermined period”) is a function of the magnification, even while the scanning rate (and therefore the period or time for the *entire* sweep or scan) remains constant.

That is, the timing of the Applicants' scintillator capturing the *secondary* electrons (predetermined period) is changed, without changing the scanning rate by the *primary* electrons (entire period), and as a result the intensity of electron irradiation per unit area does not increase at high magnification. The Examiner is invited to note page 16, line 16 through page 17, line 2 in the specification.

The Examiner is invited to consider the following diagram:

INFORMATION HERE
IS NOT NECESSARY

MAGNIFICATION IS
DETERMINED BASED
ON THIS LENGTH



In the diagram, the height A of the middle portion (“MAGNIFICATION IS DETERMINED BASED ON THIS LENGTH”) corresponds to the recited predetermined portion, during which data and secondary electrons are collected; and the total height corresponds to the entire sweep of the primary electrons.

According to the Applicants, even if the magnification is made high, the scanning rate is constant and the timing of the scintillator in capturing the electrons is shortened by adjusting a scanning length in the horizontal direction, based on the magnification (for example). The Examiner is invited to note page 13, line 31 through page 14, line 16 in the specification. By this, unnecessary information is cut off and the remaining data is extracted and output onto the CRT; see page 15, line 18 through page 16, line 6.

Otaka equates the predetermined portion to the entire sweep and does not anticipate. The Examiner is requested to reconsider the Applicants' earlier remarks.¹

§ 103(a). Claims 8-11 and 19-25 are rejected under 35 U.S.C. §103 as being unpatentable over Otaka in view of Nakagaki (U.S. Patent 6,476,388). This rejection is respectfully traversed.

Claim 23 is amended similarly to claims 1 and 12.

As the Applicants noted in the last response, Otaka does not disclose adjusting the ratio of ranges (aspect ratio) of a scanned area, as is recited in independent claims 9 and 20, and the Examiner relies on Nakagaki for disclosing first and second ranges. Nakagaki discloses locating

¹ As the Applicants previously noted:

“The cited passage at column 12, lines 25-38 typifies the prior art already discussed by the Applicants in their disclosure: “Imaging magnification ... is adjusted by changing the scanning width,” writes Otaka there. The phrase “predetermined time” at column 12, line 33 refers to the time spent imaging at a lower magnification (e.g., a time on the order of seconds) and does not refer to the scan time (e.g., a millionth of a second).

“The cited passage at column 8, lines 55-58 states that a scanning frequency producing 30 frames per second is preferably, to match the 30 frames per second of television. There is no disclosure of detecting electrons during only a portion of a scan sweep.

“The cited passage at column 5, line 33 to column 6, line 50 discusses the structure, not the beam sweep dynamics.”

defects and automatically obtaining magnified images of the defects at first and second positions (i.e., first and second coordinate). This is set out at column 12, line 53 *ff*.

There is no disclosure of adjusting the ratio of ranges when the magnification is changed. However, the Examiner writes: "It is obvious that the first and second positions can be viewed as first and second scanning ranges." The Applicants respectfully disagree, because scanning ranges are not the same thing as scanning positions. There is no connection between the center position of an image and its magnification, and, with respect, they cannot be viewed as the same thing.

Withdrawal of the rejections and allowance of all claims is requested.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS,
HANSON & BROOKS, LLP



Nick Bromer
Registration No. 33,478
(717) 426-1664, voice and fax

Address: Atty. Docket 010391
Armstrong, Westerman & Hattori, LLP
1725 K Street, NW
Suite 1000
Washington, DC 20006

Tel. No.: Armstrong, Westerman (202) 659-2930, voice; (202) 887-0357, fax